

IN THE CLAIMS:

1. (Currently Amended) A wireless communications system comprising:
 - (a) at least one mobile terminal; and
 - (b) a receiver that is mobile and includes:
 - (i) reception level acquisition means for acquiring respective reception levels of wireless signals transmitted from the at least one mobile terminals, wherein the reception level acquisition means measures the respective reception levels of the wireless signals;
 - (ii) transmission level acquisition means for acquiring respective transmission levels of the at least one mobile terminals, wherein the transmission level acquisition means retrieves respective transmission levels of the at least one mobile terminals contained in the wireless signals;
 - (iii) difference value calculation means for calculating respective difference values between the transmission levels and the reception levels; and
 - (iv) relative distance estimation means for estimating a relative distance to the mobile terminal in accordance with the respective difference values

wherein:

the reception level acquisition means retrieve respective reception levels of wireless signals sent from the wireless communications apparatus to the at least one mobile terminals contained in the wireless signals of the at least one mobile terminals; and
the transmission level acquisition means measures a transmission level of the wireless communications apparatus to the at least one mobile terminals.

Claims 2 and 3 (Cancelled)

4. (Currently Amended) The wireless communications system according to claim 1, further comprising:

transmission level writing means for writing a transmission level of the wireless communications system apparatus into a wireless signal to be transmitted to the mobile terminal.

5. (Currently Amended) The wireless communications system according to claim 4, wherein:

the transmission level writing means write an identification code of the wireless communications system apparatus into the wireless signal.

6. (Currently Amended) The wireless communications system according to claim 1, wherein the receiver is further comprising:

reception level writing means for writing the reception level into a second wireless signal to be transmitted to the mobile terminal.

7. (Currently Amended) The wireless communications system according to claim 1, wherein:

the reception level acquisition writing means writes an identification code of the receiver wireless communications apparatus into the wireless signal.

8. (Previously Presented) The wireless communications system according to claim 1, further comprising:

reception level sorting means for sorting the reception levels acquired by the reception level acquisition means.

9. (Previously Presented) The wireless communications system according to Claim 1, further comprising:

difference value sorting means for sorting difference values calculated by the difference value calculation means.

10. (Previously Presented) The wireless communications system according to claim 1, further comprising:

identification code acquisition means for acquiring respective identification codes for a plurality of the mobile terminals, the identification codes being contained in the wireless signals transmitted from the mobile terminals;

closest terminal determination means for determining, as a closest mobile terminal, a mobile terminal providing a largest reception level among the reception levels acquired by the reception level acquisition means; and

selection means for selecting, in accordance with the acquired identification code of the closest mobile terminal thus determined, only the mobile terminal having the identification code to be connected.

11. (Previously Presented) The wireless communications system according to Claim 1, further comprising:

identification code acquisition means for acquiring respective identification codes for a plurality of the mobile terminals, the identification codes being contained in the wireless signals transmitted from the mobile terminals;

terminal determination means for determining a mobile terminal providing a largest transmission level among the transmission levels acquired by the transmission level acquisition means; and

selection means for selecting, in accordance with the acquired identification code of the mobile terminal thus determined, only the mobile terminal having the identification code to be connected.

12. (Previously Presented) The wireless communications system according to Claim 1, further comprising:

identification code acquisition means for acquiring respective identification codes for a plurality of the mobile terminals, the identification codes being contained in the wireless signals transmitted from the mobile terminals;

closest terminal determination means for determining, as a closest mobile terminal, a mobile terminal providing a smallest difference value among the difference values calculated by the difference value calculation means; and

selection means for selecting, in accordance with the acquired identification code of the closest mobile terminal thus determined, only the mobile terminal having the identification code to be connected.

13. (Previously Presented) The wireless communications system according to claim 1, further comprising:

identification code acquisition means for acquiring respective identification codes for a plurality of the mobile terminals, the identification codes being contained in the wireless signals transmitted from the mobile terminals;

close terminal determination means for determining, as close mobile terminals, at least one mobile terminals providing a reception level greater than a predetermined threshold value among the reception levels acquired by the reception level acquisition means; and

selection means for selecting, in accordance with the identification codes acquired for the close mobile terminals thus determined, mobile terminals having the identification code to be connected.

14. (Previously Presented) The wireless communications system according to Claim 1, further comprising:

identification code acquisition means for acquiring respective identification codes for a plurality of the mobile terminals, the identification codes being contained in the wireless signals transmitted from the mobile terminals;

terminal determination means for determining at least one mobile terminals providing a transmission level greater than a predetermined threshold value among the transmission levels acquired by the transmission level acquisition means; and

selection means for selecting, in accordance with the identification codes acquired for the mobile terminals thus determined, mobile terminals having the identification code to be connected.

15. (Previously Presented) The wireless communications system according to Claim 1, further comprising:

identification code acquisition means for acquiring respective identification codes for a plurality of the mobile terminals, the identification codes being contained in the wireless signals transmitted from the mobile terminals;

close terminal determination means for determining, as close mobile terminals, at least one mobile terminals providing a difference value less than a predetermined threshold value among the difference values calculated by the difference value calculation means; and

selection means for selecting, in accordance with the identification codes acquired for the close mobile terminals thus determined, mobile terminals having the identification code to be connected.

16. (Previously Presented) The wireless communications system according to any one of claims 10 through 15, further comprising:

transmission level reduction means for reducing a transmission level of a wireless signal to be transmitted to a mobile terminal at a relative distance, having been estimated by the relative distance estimation means, shorter than a predetermined distance among the mobile terminals selected by the selection means.

17. (Previously Presented) The wireless communications system according to any one of claims 10 through 15, further comprising:

transmission level raise means for raising a transmission level of a wireless signal to be transmitted to a mobile terminal at a relative distance, having been estimated by

the relative distance estimation means, longer than a predetermined distance among the mobile terminals selected by the selection means.

18. (Currently Amended) The wireless communications system according to claim 4, further comprising:

writing control means for controlling the transmission level writing means to periodically write a transmission level into a second wireless signal.

19. (Currently Amended) The wireless communications system according to claim 6, further comprising:

writing control means for controlling the reception level writing means to periodically write a reception level into a second wireless signal.

20. (Currently Amended) A wireless communication system, including a plurality of the wireless communications system apparatuses similarly configured as the moblie receiver according to any one of claims 1 or 4 through 15, 18, and 19.

21. (Previously Presented) A wireless communications apparatus comprising:

reception level acquisition means for acquiring respective reception levels of wireless signals transmitted from at least one mobile terminals, wherein the reception level acquisition means measures the respective reception levels of the wireless signals;

transmission level acquisition means for acquiring respective transmission levels of the mobile terminal, wherein the transmission level acquisition means retrieves respective transmission levels of the mobile terminals contained in the wireless signals;

difference value calculation means for calculating respective difference values between the transmission levels and the reception levels; and

relative distance estimation means for estimating a relative distance to the mobile terminal in accordance with the respective difference values;

wherein

the reception level acquisition means retrieve respective reception levels of wireless signals sent from the wireless communications apparatus to the at least one mobile terminal contained in the wireless signals of the at least one mobile terminals; and

the transmission level acquisition means measures a transmission level of the wireless communications apparatus to the at least one mobile terminals.